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Access DB# _____

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Lisa V. Cook Examiner #: 77134 Date: 11/21/02
 Art Unit: 1641 Phone Number 305-0808 Serial Number: 09/462,931
 Mail Box and Bldg/Room Location: CM1 7B-12 Results Format Preferred (circle) PAPER DISK E-MAIL
Office CM1 7B-17

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Isolated Osteocalcin fragments

Inventors (please provide full names): Jukka Hellman,

Earliest Priority Filing Date: _____

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Structure Search Seq. Id. No. 2
 Interference Search
 oligomer search.

Point of Contact: Thomas G. Larson, Ph.D.
 703-308-7309
 CM1, Rm. 6 B 01

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- within Seq. Id. No. 2
 search positions 6-30 and positions 7-30
 with gamma-carboxylated glutamic acids at
 positions 17, 21, and 24. See attached claims
 to bib sheet.

Amended case

Point of Contact:
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 703-308-7309
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JOHN R. RICHTER
 JURY COPY SENT
 11/18/02

Thanks,
 Lisa C

☺

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Searcher: <u>TGL</u>	Type of Search	Vendors and cost where applicable
Searcher Phone #: _____	NA Sequence (#) _____	STN <u>58</u>
Searcher Location: _____	AA Sequence (#) <u>2</u>	Dialog _____
Date Searcher Picked Up: <u>11/27</u>	Structure (#) <u>1</u>	Questel/Orbit _____
Date Completed: <u>12/6</u>	Bibliographic <u>✓</u>	Dr. Link _____
Searcher Prep & Review Time: <u>100</u>	Litigation _____	Lexis/Nexis _____
Clerical Prep Time: _____	Fulltext _____	Sequence Systems <u>ABSS02, IG-Gened</u>
Online Time: <u>78</u>	Patent Family _____	WWW/Internet _____
	Other _____	Other (specify) _____

Marked-Up Copy of the Amended Claims

25 (amended). A monoclonal antibody or recombinant antibody fragment ~~having the capability of binding~~ which binds a human gamma-carboxylated osteocalcin fragment, wherein said monoclonal antibody or recombinant antibody fragment has the specificity to epitopes that have been identified on said gamma-carboxylated fragment of osteocalcin, said osteocalcin fragment selected from the group consisting of

i) a fragment which spans from amino acid in position 7 to amino acid in position 30 of the amino acid sequence set forth in SEQ ID NO:2 in which all three glutamic acids in positions 17, 21 and 24 of said sequence are gamma-carboxylated, and

ii) a fragment which spans from amino acid in position 6 to amino acid in position 30 of the amino acid sequence of SEQ ID NO:2 ~~[and that]~~ in which all three glutamic acids in the positions 17, 21 and 24 of said sequence are gamma-carboxylated.

26 (amended). A non-competitive immunoassay for quantitative determination of a gamma-carboxylated osteocalcin fragment in a sample comprising contacting [a] the sample [containing said osteocalcin fragment] with two monoclonal antibodies or recombinant antibody fragments which bind said osteocalcin fragment, [and detecting] measuring bound monoclonal antibody or recombinant antibody fragment, comparing said amount with an amount measured in a sample having a known quantity of said osteocalcin fragment, wherein said monoclonal antibody or recombinant antibody fragment has the specificity to epitopes that have been identified on said gamma-carboxylated fragment of osteocalcin, said osteocalcin fragment selected from the group consisting of

i) a fragment which spans from amino acid in position 7 to amino acid in position 30 of the amino acid sequence set forth in SEQ ID NO:2 in which all three glutamic acids in positions 17, 21 and 24 of said sequence are gamma-carboxylated, and

ii) a fragment which spans from amino acid in position 6 to amino acid in position 30 of the amino acid sequence of SEQ ID NO:2[, and that] in which all three glutamic acids in the positions 17, 21 and 24 of said sequence are gamma-carboxylated.

Clean Copy of the Amended Claims

22

5 (amended). A cell line producing the monoclonal antibody of claim 25.

23

8 (twice amended). The immunoassay of claim 26, wherein the non-competitive immunoassay is carried out in either a one-step or a two-step incubation procedure.



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BIBDATASHEET**CONFIRMATION NO. 5666**

Bib Data Sheet

SERIAL NUMBER 09/462,931	FILING DATE 01/18/2000 RULE	CLASS 435	GROUP ART UNIT 1641	ATTORNEY DOCKET NO. 2328-115
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APPLICANTS

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KIM PETTERSSON, TURKU, FINLAND;

**** CONTINUING DATA *******

This application is a 371 of PCT/FI98/00550 06/24/1998

**** FOREIGN APPLICATIONS *******

FINLAND 973371 08/15/1997

priority 1997

IF REQUIRED, FOREIGN FILING LICENSE GRANTED

**** 04/11/2000**

Foreign Priority claimed 35 USC 119 (a-d) conditions met Verified and Acknowledged	<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance	STATE OR COUNTRY FINLAND	SHEETS DRAWING 13	TOTAL CLAIMS 13	INDEPENDENT CLAIMS 1
Examiner's Signature _____ Initials _____					

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TITLE

ISOLATED OSTEOCALCIN FRAGMENTS

FILING FEE	FEES: Authority has been given in Paper	<input type="checkbox"/> All Fees
RECEIVED	No. _____ to charge/credit DEPOSIT ACCOUNT	<input type="checkbox"/> 1.16 Fees (Filing)
	No. _____ for following:	<input type="checkbox"/> 1.17 Fees (Processing Ext. of time)
		<input type="checkbox"/> 1.18 Fees (Issue)

STIC Search
Submitted 11/21/02.
L/Cook

Serial No. 09/462,931
September 13, 2002
Marked-Up Copy, Page 1

Marked-Up Copy of the Amended Claims

25 (amended). A monoclonal antibody or recombinant antibody fragment [having the capability of binding] which binds a human gamma-carboxylated osteocalcin fragment, wherein said monoclonal antibody or recombinant antibody fragment has the specificity to epitopes that have been identified on said gamma-carboxylated fragment of osteocalcin, said osteocalcin fragment selected from the group consisting of

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25 (amended). A monoclonal antibody or recombinant antibody fragment which binds a human gamma-carboxylated osteocalcin fragment, said monoclonal antibody or recombinant antibody fragment has the specificity to epitopes that have been identified on said gamma-carboxylated fragment of osteocalcin, said osteocalcin fragment selected from the group consisting of:

i) a fragment which comprises amino acids 7-30 of the amino acid sequence set forth in SEQ ID NO:2 in which all three glutamic acids in positions 17, 21, and 24 of said sequence are gamma-carboxylated, and

ii) a fragment which comprises amino acids 6-30 of the amino acid sequence of SEQ ID NO:2 in which all three glutamic acids in the positions 17, 21 and 24 of said sequence gamma-carboxylated.

26 (amended). A non-competitive immunoassay for quantitative determination of a gamma-carboxylated osteocalcin fragment comprising contacting a sample containing said osteocalcin fragment with two monoclonal antibodies or recombinant antibody fragments which bind said osteocalcin fragment, detecting bound monoclonal antibody or recombinant antibody fragments and correlating bound monoclonal antibody or recombinant antibody fragments with amount of osteocalcin fragment present, wherein said monoclonal antibody or recombinant antibody fragment has the specificity to epitopes that have been identified on said gamma-carboxylated fragment of osteocalcin, said osteocalcin fragment selected from the group consisting of

i) a fragment which comprises amino acids 7-30 of the amino acid sequence set forth in SEQ ID NO:2 in which all three glutamic acids in positions 17, 21 and 24 of said sequence are gamma-carboxylated, and

Serial No. 09/462,931

30 May 2002

Page 3

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